Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims

~~Claim~~ 1. (Currently amended) [[:]] ~~Process~~ A process for adjusting the print image of a rotation printing machine,

comprising ink transfer rollers ~~(F, K)~~ and actuators assigned to them,

with which it is possible to change ~~the~~ a position of the rollers ~~(F, K)~~, and in which

at least one sensor [[-]] ~~for instance, a camera~~ [[-]] measures and records ~~the~~ a value of an intensity of light experiencing an interaction with ~~the~~ a printed material and

that the recorded measured values are fed to a control and regulation unit,

that compares the recorded measured values with set values and

that generates corrective signals for the actuator of at least one part of the rollers involved in the printing process

based on which the actuator changes ~~the~~ a relative position ~~(x)~~ of the roller assigned to it until the measured values once again lie within a tolerance range

characterized in that

2

during the printing process at least one sensor records measurements of the intensity of light experiencing an interaction with the printed material,

during the printing operation the measured values are assigned to the ink transferred in at least one inking unit,

during the printing operation the control and regulation unit generates corrective signals for the actuator of at least one part of the rollers ~~(F, K)~~ of the respective inking unit involved in the printing process, <u>such that for a variation in the printing speed, the control and regulation unit generates additional corrective signals based on which the actuators adjust the roller positions in relation to the printing speed,</u>

so that the variations in the ink quantity transferred onto a unit of area of the print image remain within a set range.

~~Claim~~ 2. (Canceled)

~~Claim~~ 3. (Currently amended) [[:]] ~~Process~~ <u>The process</u> according to claim ~~2~~ <u>1</u>, characterized in that ~~in case of changes~~ <u>for the variation</u> in the printing speed ~~(v)~~, the control and regulation unit generates additional corrective signals based on calibration tables or algorithms that are stored in a storage device.

Claim 4. (Currently amended) [[:]] Process The process according to claim 1, characterized in that the sensor records the intensity of light that is has penetrated previously by the printed material.

Claim 5. (Currently amended) [[:]] Process The process according to claim 4, characterized in that at least one light source supplies the light to the a side of the printed material that is opposite to the sensor.

Claim 6. (Currently amended) [[:]] Rotation A rotation printing machine with the following features comprising:

ink transfer rollers (F, K) and actuators assigned to them,

wherein it is possible, with at least one actuator, to of the actuators can change the a relative position (x) of the roller assigned to it based on corrective signals of the control and regulation unit [[,]];

at least one sensor [[-]] for instance, a camera [[-]] for recording the that measures and records a value of an intensity of light experiencing an interaction with the a printed material[[,]];

a control and regulating unit comprising means to compare that compares the recorded measured values with set values and with which it is possible to generate that generates the corrective

4

signals for the actuator of at least one part of the rollers ~~(F, K)~~

~~involved in the printing process~~,

characterized in that

the control and regulating unit ~~is provided with a program using which~~ assigns the <u>values</u> measured ~~values~~ during the printing operation ~~are assigned~~ to ~~the~~ <u>an amount of</u> ink transferred in the inking unit<u>,</u> and

~~that it is possible, with the control and regulation unit to generate corrective signals during the printing operation for the actuator of at least one part of the rollers of the respective inking unit involved in the printing process~~

<u>for a variation in a printing speed, the control and regulating unit generates additional corrective signals based on which the actuators adjust the roller positions in relation to the printing speed.</u>

~~Claim~~ 7<u>.</u> (Currently amended) [[:]] ~~Device~~ <u>The machine</u> according to claim 6<u>,</u> characterized in that [[,]] ~~at least one~~ <u>the</u> sensor ~~with which it is possible to measure~~ <u>measures</u> the light intensity in ~~different~~ <u>various</u> spectral ranges.

~~Claim~~ 8-9<u>.</u> (Canceled)

10. (New) The machine according to claim 6, wherein the sensor is a camera.

11. (New) A process for adjusting a quantity of ink transferred in a printing operation, comprising:

illuminating a printed material during the printing operation with a light of a predetermined intensity;

measuring the intensity of the light that interacts with the printed material;

evaluating the measured intensity with a control and regulation unit that compares the measured intensity with a set intensity and that associates the measured intensity with a quantity of ink transferred from a respective inking unit;

generating a first corrective signal for an actuator associated with each of a first and a second ink transfer roller of the inking unit, the actuators adjusting a relative position of the ink transfer rollers so that the measured intensity lies within a set intensity range; and

detecting a speed of the printing operation such that for a variation in the printing speed, the control and regulation unit generates a second corrective signal based on which the actuators further adjust the relative position of the ink transfer rollers in relation to the detected printing speed so that a quantity of ink

transferred onto the printed material remains within a set ink quantity range.

12. (New) The process according to claim 11, wherein the step of measuring the light intensity includes measuring the light that penetrates the printed material.

13. (New) The process according to claim 12, wherein the step of measuring the light intensity includes detecting the light with a sensor on a side of the printed material that is opposite a source of the light.

14. (New) The process according to claim 11, wherein the ink transfer rollers include a plate roller and an inking roller, and wherein the step of detecting the speed of the printing operation includes determining a rotational speed of the plate roller.

15. (New) The process according to claim 14, wherein the step of determining the speed of the printing operation includes determining an effective radius of the rotating plate roller.

16. (New) A process for adjusting a quantity of ink transferred in a printing operation, comprising:

illuminating a printed material during the printing operation with a light of a predetermined intensity;

measuring the intensity of the light that illuminates the printed material;

evaluating the measured intensity by comparing the measured intensity with a set intensity and associating the measured intensity with a quantity of ink transferred from a respective inking unit;

providing a first corrective signal to an actuator associated with each of a plate roller and an inking roller of the inking unit, the actuators adjusting a relative position of the plate roller and the inking roller so that the measured intensity lies within a set intensity range;

detecting a speed of the printing operation by determining a rotational speed of the plate roller; and

providing a second corrective signal to the actuators based on the detected printing speed such that the actuators further adjust the relative position of the plate roller and the inking roller so that the ink quantity transferred onto the printed material is within a set ink quantity range.

17. (New) A process according to claim 16, wherein the step of adjusting the relative position of the plate roller and the inking roller includes moving the plate roller and the inking roller

relative to a position of an impression roller that is in operative communication with the plate roller.

18. (New) A process according to claim 16, wherein the steps of detecting the speed of the printing operation and providing the second corrective signal to the actuators are performed before the steps of evaluating the measured intensity and providing the first corrective signal to the actuators.

19. (New) A printing machine comprising:

a light source having a predetermined light intensity that illuminates a printed material during a printing operation;

a sensor located on a side of the printed material opposite the light source that measures the intensity of the light received through the printed material;

a detector that determines a speed of the printing operation by detecting a rotational speed of a plate roller that operatively communicates with an inking roller and with an impression roller; and

a control and regulating unit that i) evaluates the measured light intensity by comparing the measured intensity with a set intensity, associates the measured intensity with a quantity of ink delivered from an inking unit, and provides a first corrective signal to actuators that adjust a relative position of the plate

roller and the inking roller so that the measured light intensity lies within a set intensity range, and ii) evaluates the detected printing speed and provides a second corrective signal based thereon to the actuators, which further adjust the relative position of the plate roller and the inking roller such that the ink quantity transferred onto the printed material is within a set ink quantity range.

20. (New) The machine according to claim 19, wherein the detector determines the speed of the printing operation by determining an effective radius of the rotating plate roller based on i) a distance between a rotation axis of the plate roller and an outer circumference of the plate roller and ii) a contact pressure between the plate roller and the impression roller or between the plate roller and the inking roller.

21. (New) The machine according to claim 19, wherein the control and regulating unit determines the second corrective signal based on stored calibrations that associate a plate roller speed with a plate roller position.